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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/938,937	08/24/2001	Zohar Yakhini	10003516-1	2672

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AGILENT TECHNOLOGIES, INC.
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EXAMINER

SISSON, BRADLEY L

ART UNIT PAPER NUMBER

1634

DATE MAILED: 01/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Interview Summary

Application No.

09/938,937

Applicant(s)

YAKHINI ET AL.

Examiner

Bradley L. Sisson

Art Unit

1634

All participants (applicant, applicant's representative, PTO personnel):

(1) Bradley L. Sisson.

(3) _____.

(2) Cynthia Lee, Reg. No. 46,033.

(4) _____.

Date of Interview: 10 January 2006.

Type: a) ☒ Telephonic b) ☐ Video Conference
c) ☐ Personal [copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☒ Yes e) ☐ No.

If Yes, brief description: Draft amendment to claims faxed to Office on 04 January 2006.

Claim(s) discussed: 10-14.

Identification of prior art discussed: _____.

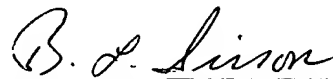
Agreement with respect to the claims f) ☐ was reached. g) ☒ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: See Continuation Sheet.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.


Examiner's signature, if required

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

Continuation of Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Ms. Lee indicated that as reflected in the draft claim amendment, claims 17 and 18 would be canceled.

Mr. Sisson suggested that the term "nucleic acids" as found in Claim 10, step a), line 5 be changed to the singular form (nucleic acid) as each location is to comprise nucleic acid that has but a single nucleotide sequence.

Mr. Sisson suggested that reference to "sequence" be amended so to reflect a >>nucleotide sequence<<.

Claim 10, step b) was discussed. Agreement was reached that as proposed, duplicate "a" appears in line 5, for which one would be deleted. The clause "of nucleic acids" in line 6 would be deleted as would the tem "second" as found in line 9.

Mr. Sisson noted that the sample fairly encompasses the sequencing of any nucleic acid found in any sample, and that the sample could be quite crude. In support of this position Mr. Sisson directed attention to page 18 of the disclosure.

Mr. Sisson noted that neither the claimed method nor the specification teaches a method where nucleic acids in a crude sample are accurately sequenced when no preparation is performed.

The aspect of amending claim 1, step e) was discussed. Mr. Sisson suggested applicant consider amending the claim to read "contacting the second plurality of nucleic acids with the first plurality of nucleic acids under hybridization conditions."

Mr. Sisson suggested amending claim 10, step f) to include a Markush group identifying the members from which the nucleic acid is chosen.

It was agreed that step g) was confusing and would be reworded.

Mr. Sisson expressed concern that as presently worded, one would not be able to accurately sequence an unknown target nucleic acid. While one would be hybridizing an immobilized first nucleic acid to a first region of a second nucleic acid, and that the target nucleic acid would in turn hybridize to a second region of the second nucleic, there is no means or logic recited that would allow one to identify just what the target nucleic acid's nucleotide sequence actually is. Mr. Sisson added that as presently worded, the second nucleic acid could be labeled, and that the label would be present irregardless of there being any hybridization between the target and any member of the second plurality of nucleic acids. It was further noted that if the target is labeled, and one does not know the identity of the nucleotide sequence of the second region of the second plurality, then one would not be able to extrapolate or otherwise deduce the correct nucleotide sequence of the target nucleic acid .

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:

YAKHINI *et al.*

Confirmation No.: 2672

Serial No.: 09/938,937

Group Art Unit: 1634

Filed: August 24, 2001

Examiner: SISSON, Bradley L.

Docket No. 10003516-1
(TKHR No.: 050113-1100)For: Use of Unstructured Nucleic Acids in
Assaying Nucleic Acid Molecules

→ ****PROPOSED** AMENDMENTS TO THE CLAIMS** ← *Do not enter amts.*

→ (FOR DISCUSSION PURPOSES ONLY) ←

for tel. conf. 01/10/06, 9:30 am.

Please review the proposed draft amendments to the claims as indicated hereafter for purposes of a discussion.

1. (Withdrawn) A system for assaying multiple nucleic acid molecules in one or more biological samples having one or more nucleic acid targets per sample comprising:

a plurality of nucleic acid probes, wherein each nucleic acid of the plurality is different from other nucleic acids in the plurality, and

a plurality of intermediary nucleic acids, wherein each intermediary nucleic acid comprises a first region and a second region, wherein each intermediary nucleic acid is different from other intermediary nucleic acids in the plurality of intermediary nucleic acids by comprising a different first region, wherein the first region of each intermediary nucleic acid is complementary to a different nucleic acid probe of the plurality of nucleic acid probes, and wherein the second region of each intermediary nucleic acid is complementary to a potential target nucleic acid in a sample, wherein each probe of the plurality of nucleic acid probes and each second region of each intermediary nucleic acid comprises unstructured nucleotides, such that the second region of each intermediary nucleic acid has a reduced ability to form a stable duplex with a nucleic acid probe having regions of complementarity, wherein the second region of each intermediary nucleic acid forms a stable duplex with a complementary target nucleic acid, and wherein

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each nucleic acid probe forms a stable duplex with a complementary first region of an intermediary nucleic acid.

2. (Withdrawn) The system of claim 1, wherein the nucleic acid probes comprising modified and unmodified nucleotides and the second region of intermediary nucleic acids comprising modified nucleotides comprise complementary nucleotides that have a reduced ability to form base pairs with each other, wherein the modified nucleotides form base pairs with unmodified nucleotides.

3. (Withdrawn) The system of claim 1, wherein the modified nucleotides comprise A' and T' wherein A' and T' have a reduced ability to form a base pair, wherein A' forms a base pair with T*, and wherein T' forms a base pair with A*.

4. (Withdrawn) The system of claim 3, wherein A' is 2-aminoadenosine, wherein T is 2-thiothymidine, wherein A* is adenosine and wherein T* is thymidine.

5. (Withdrawn) The system of claim 1, wherein the modified nucleotides comprise G' and C' wherein G' and C' have a reduced ability to form a base pair, wherein G' forms a base pair with C*, and wherein C' forms a base pair with G*.

6. (Withdrawn) The system of claim 3, wherein G' is inosine, wherein C' is pyrrolopyrimidine, wherein G* is guanosine and wherein C* is cytosine.

7. (Withdrawn) The system of claim 1, wherein the plurality of nucleic acid probes is fixed on a substrate in an array pattern, wherein a sequence of a nucleic acid probe corresponds to a known location in the array pattern.

8. (Withdrawn) The system of claim 1, wherein the plurality of nucleic acid probes is fixed on a substrate in an array pattern, wherein a sequence of a nucleic acid probe associated with a known bead particle.

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9. (Withdrawn) The system of claim 1, wherein the plurality of nucleic acid probes is fixed on a substrate in an array pattern, wherein a sequence of a nucleic acid probe is associated with a defined tag moiety wherein the tag is detectable by mass electrophoretic mobility or optical property.

10. (Currently Amended) A method of assaying target nucleic acid molecules by tagging and sorting the target molecules, comprising the steps of:

a) providing a first plurality of nucleic acids, ~~wherein each nucleic acid of the first plurality is different from other nucleic acids in the first plurality, and~~ wherein the first plurality of nucleic acids ~~are~~ is immobilized on a surface such that different sequences of the first plurality of nucleic acids can be differentiated by location, wherein the nucleic acids at each location has a different sequence than nucleic acids at other locations;

b) providing a second plurality of nucleic acids, wherein each second nucleic acid of the second plurality comprises a first region and a second region, wherein each first region of each second nucleic acid has a different sequence from other first regions of other nucleic acids in the second plurality, wherein the each first region of ~~each second nucleic acid~~ acids of the second plurality is complementary to a ~~different first~~ a sequence of nucleic acid acids of the first plurality, wherein at least one second region of the second nucleic acids in the second plurality is complementary to a target nucleic acid in a biological sample, wherein each nucleic acid of the first plurality and each second region of each second nucleic acid of the second plurality comprise unstructured nucleotides such that the second region of each second nucleic acid has a reduced ability to hybridize to a first nucleic acid of the first plurality having a complementary sequence without reducing the ability of the second region of each second nucleic acid to hybridize to a complementary nucleic acid molecule in a biological sample;

c) providing a biological sample containing nucleic acids to be analyzed;

d) contacting the biological sample with the second plurality of nucleic acids under conditions that permit hybridization of complementary sequences between the nucleic acid molecules in the sample and the second region of a second nucleic acids of the second plurality;

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e) contacting the second plurality of nucleic acids with the first plurality of nucleic acids under conditions that permit hybridization of complementary sequences between the first region of a second nucleic acid of the second plurality and the first nucleic acids in the first plurality;

f) detecting nucleic acids in the biological sample that have hybridized to a nucleic acid of the second plurality by detecting a signal of a label that is part of the nucleic acids chosen from at least one of: the biological sample and the second plurality of nucleic acids;

g) determining a ~~position~~ location on the ~~substrate~~ surface of the detectable signal of the label; and

h) determining the sequence of the nucleic acid in the biological sample that has hybridized to a nucleic acid of the second plurality by correlating the ~~position~~ location of the signal to the sequence.

11. (Original) The method of claim 10, wherein the steps of (d) and (e) are performed simultaneously.

12. (Original) The method of claim 10, wherein after step (e), unhybridized nucleic acids are removed.

13. (Previously Presented) The method of claim 10, wherein the step of detecting the label further comprises detecting the label by measuring light emission from the label.

14. (Previously Presented) The method of claim 10, wherein the step of contacting the biological sample with the second plurality of nucleic acids further comprises labeling the nucleic acids that having hybridized with a nucleic acid in the sample with a detectable label.

15.-18. (Canceled)